

Attorney Docket No.: SIT-0106
Inventors: Esche and Nazalewicz
Serial No.: 09/954,994
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REMARKS

Claims 1 and 2 are pending in this application. Claims 1 and 2 have been rejected. Claims 1 and 2 have been amended as supported in the specification. No new matter has been added by this amendment. Applicants respectfully request reconsideration in view of the following remarks.

I. Information Disclosure Statement

The Examiner suggests that a proper Information Disclosure Statement has not been filed. Applicants wish to point out that an Information Disclosure Statement has been previously filed in this case on March 5, 2002, via first class U.S. mail. A copy of the Information Disclosure Statement as filed is attached herewith.

Applicants believe that these remarks and the attachment overcome the Examiner's objection.

II. Specification

The Examiner suggests that element numbers 10 and 42 were both used in the specification to designate the upper pressure chamber. Element number 10 is suggested to be first used on page 4, line 30 and element number 42 is suggested to be first used on page 5, line 9.

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The Examiner further suggests that element numbers 12 and 52 were both used in the specification to designate the lower pressure chamber. Element number 12 is suggested to be first used on page 4, line 30 and element number 52 is suggested to be first used on page 5, line 9.

It is respectfully pointed out that element number 10 and 42 denote different elements. Element number 10 as first used on page 4, line 30 refers to the upper pressure chamber. Element number 42 as first used on page 5, line 9 refers specifically to only the bottom side of the upper pressure chamber.

Similarly, element number 12 designates the lower pressure chamber as first used on page 4, line 30 and element number 52 designates only the bottom to the lower pressure chamber as first used on page 5, line 9.

Therefore, the same reference character is used for showing only one part of the invention, as required by MPEP 608.02. Applicant believes these remarks overcome the Examiner's objection.

Withdrawal of the rejection is respectfully requested.

III. Claim Objections

Claim 1 is objected to because it is suggested that the phrase "said pressure chamber", should be changed to recite "said

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at least one pressure chamber". In accordance with the Examiner's suggestion, Applicants have amended claim 1 to recite "said at least one pressure chamber".

Withdrawal of this rejection is respectfully requested.

IV. Rejection of claims under 35 U.S.C. §112, second paragraph

The Examiner has rejected claims 1 and 2 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner suggests that with regard to claims 1 and 2, the phrase "operating point lacks proper antecedent basis. It is further suggested that with regard to claim 2, the phrase "the preload" in the last two lines of the claim lacks proper antecedent basis.

In response to the Examiner's suggestions, claim 1 has been amended to recite a passive isolator with a nonlinear force-deflection characteristic and an operating point, as supported throughout the specification and at page 4, line 24. Claim 2 has been amended to recite the mechanical actuator is comprised of a spring, and a means for externally controlling a preload to said spring. Support for this amendment is found

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throughout the specification and at page 8, paragraph 1.

Applicants believe that these amendments overcome the 35 U.S.C. 112 rejection. Withdrawal of this rejection is respectfully requested.

V. Rejection of claims under 35 U.S.C. §102(e)

The Examiner has rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by Genesseeux (U.S. Patent 6,371,462). Specifically, the Examiner suggests that Genesseeux shows in Figure 1 a device for adaptive vibration attenuation comprising a passive isolator 17 with a nonlinear force-deflection characteristic as disclosed in col. 2, lines 2-3 and a pneumatic actuator (P) 49 which varies the operating point of the isolator along the force-deflection characteristic wherein the pneumatic actuator comprises at least one pressure chamber P wherein the air pressure in the chamber can be externally controlled via elements 49, 50, 51, 52 and 55. Applicants respectfully disagree.

Claim 1, as recited above, teaches a device for adaptive vibration attenuation comprising a passive isolator with a nonlinear force-deflection characteristic and an operating point; and a pneumatic actuator which varies the operating point of said

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isolator along said force-deflection characteristic wherein the pneumatic actuator comprises at least one pressure chamber wherein air pressure in said at least one pressure chamber can be externally controlled.

Under MPEP 706.02, and 35 U.S.C. 102(e) an invention is not patentable if the invention was described in an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent.

Accordingly, claim 1 cannot be considered anticipated under section 102(e), as claim 1 of the present invention is patentably distinguishable from the Gennesseaux reference.

First, contrary to the Examiner's suggestion, Gennesseaux teaches a flexible elastomer membrane 17 which constitutes an exciter member designed to generate counter vibrations in the working chamber A, see Columns 3-4. This explicit teaching confirms that the flexible elastomer membrane 17, as taught by Gennesseaux is not a passive isolator.

Furthermore to the same point, Gennesseaux teaches at column 8, line 29-30, that the exciter member vibrates so as to generate counter-vibrations in the working chamber. This teaching is solely indicative of an **active** isolator where counter vibrations are generated (i.e energy must be supplied on a continuous

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basis). On the contrary, Applicants present invention is a **passive** isolator whose operating point on a non-linear force-vs-deflection curve can be adjusted by pneumatic or mechanical means, respectively, whereas energy must only be applied when adjusting the operating point. Thus Gennesseaux cannot be held to teach the claimed invention.

It is therefore respectfully requested that this rejection be withdrawn.

VI. Rejection of claims under 35 U.S.C. §102(a)

Claim 2 is rejected under 35 U.S.C. 102(a) as being anticipated by JP 2000-291725 (JP'725). JP'725 is suggested to show a device for adaptive vibration attenuation comprising a passive isolator 14a, 14b with a non-linear force deflection characteristic as disclosed in line 3 of the novelty section of the English abstract and a mechanical actuator, 22, 28, which varies the operating point of the passive isolator along the force-deflection characteristic wherein the mechanical actuator is comprised of a spring 28 and a means 22 for externally controlling the preload to the spring.

Applicants respectfully disagree.

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MPEP 706.02 and 35 U.S.C. 102(a) recite that a person shall be entitled to a patent unless (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

Claim 2 of the present invention recites a device for adaptive vibration attenuation comprising **a passive isolator** with a nonlinear force-deflection characteristic and a mechanical actuator which varies the operating point of said passive isolator along said force-deflection characteristic wherein the mechanical actuator is comprised of a spring, and a means for externally controlling a preload to said spring. This claim is patentably distinct from JP'725

JP'725 teaches that the damper device 10 has a damping mass 12 supported from both sides by springs 14a-d of nonlinear characteristics and coiled springs 28. JP'725 explicitly teaches a damping device involving an additional mass and therefore, it is **not** a passive isolator such as described in the present invention. JP'725 is representative of the classical "vibration absorber" where an additional degree of freedom is added to the system (mass 12) which absorbs most of the kinetic energy while the amplitudes of the remaining degrees of freedom of the system

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are damped (i.e., reduced or eliminated). The fact that JP'725 springs 14a-d have non-linear characteristics is immaterial for the functional principle of such a vibration absorber. JP'725 requires additional masses to absorb vibration. On the contrary, the Applicants present invention does not function as an absorber, which would involve an additional mass to undergo vibrations on its own in order to absorb kinetic energy, but rather claims a passive isolator. Contrary to JP'725, the present invention represents a vibration isolator, which can be tuned to the frequency of the excitation by adjusting its stiffness characteristics. In contrast to active vibration isolators, the tuning of this passive isolator requires energy input only temporarily in order to adjust the operating point.

Accordingly, JP'725 cannot be held to anticipate claim 2 as it does not teach such a passive isolator.

It is therefore respectfully requested that this rejection be withdrawn.

VII. Previous Amendment to Specification

The Examiner has objected to the previous amendment to the specification of June 23, 2003, in that it did not include markings to indicate the changes made relative to the immediate

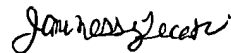
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version of the specification. Applicants believe that clear instruction was set forth in the amendment to entire paragraphs of the specification in the paper filed June 23, 2003.

VIII. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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